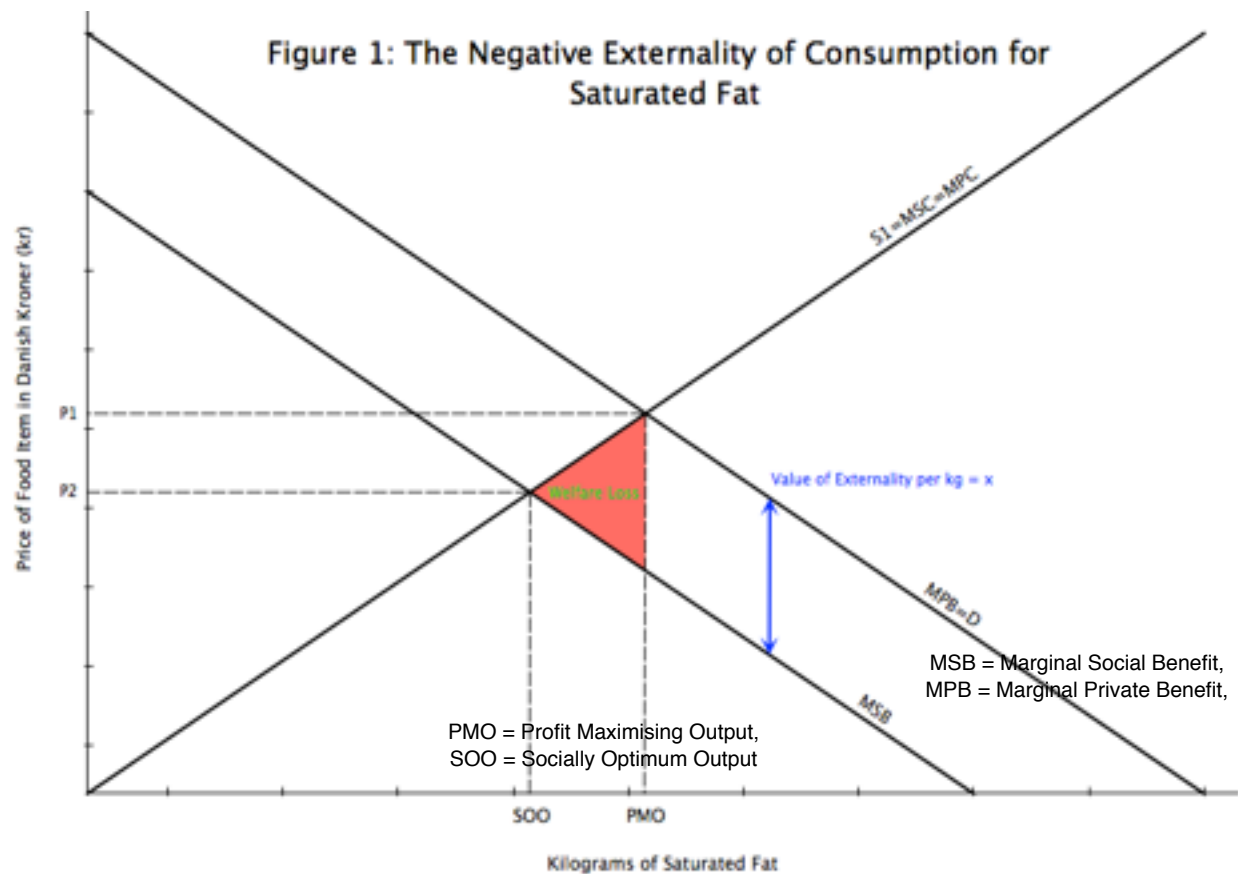


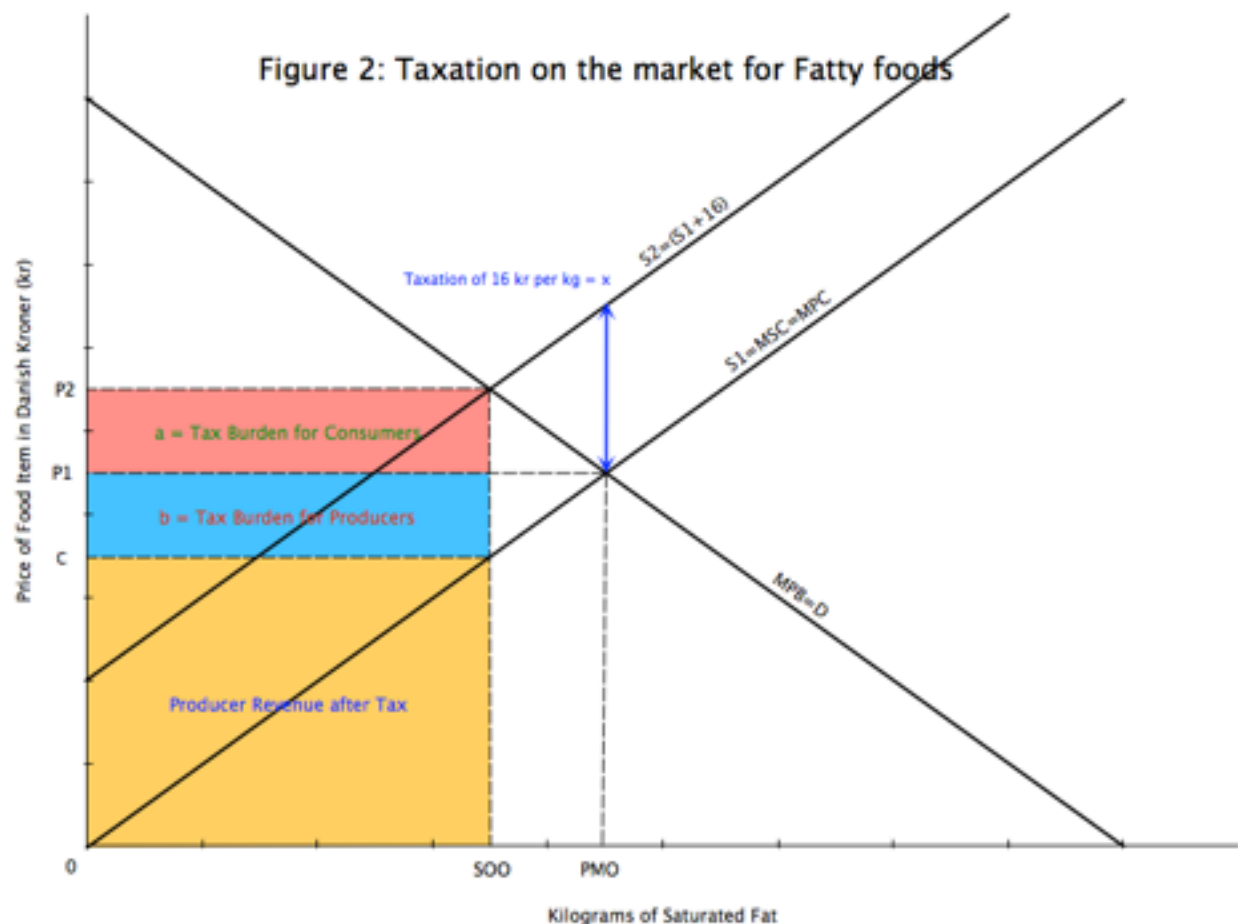
The Danish government deems saturated fat a demerit good - harmful products that would be over-provided by market forces. It has done so on the grounds that saturated fats are harmful due to cardiovascular complications. This de-merit good is deemed to possess negative externalities of consumption - the external costs to a third party when a product is consumed. This negative externality of consumption presents itself as increased costs to the Danish tax-funded single-payer healthcare system. Thus, in order to correct this instance of market failure (when community surplus is not maximised; output is not at the SOO), the Danish government has taken to levying an indirect tax (a tax placed upon the expenditure on a good) on the purchase of fatty foods at 16 Danish kroner per kilogram.



The situation is illustrated by Figure 1. With the overconsumption of foods containing saturated fat, the third-party affected by the negative externality are the Danish taxpayers. Saturated fat leads to cardiovascular complications and cancer, which are conditions the Danish healthcare system is obligated to treat. As such, society benefits less than the individual because there are external costs to taxpayers. The cost of this medical treatment (medication, technology etc) presents itself as the value of the negative externality “x”. This situation is shown by the fact that  $MPB > MSB$ . In a free market, it is assumed consumers are rational and will generally attempt to maximise their private utility (benefit) without considering social cost, and thus will ignore the negative externality. For this reason, if no government intervention is taken, production

levels of fatty foods will remain at PMO. In this case, market failure exists due to the presence of welfare loss (marked by red), meaning community surplus is not maximised. In order to correct this market failure, the cost of the externality must be accounted for and output must be reduced to SOO.

The measure taken by the Danish government in this instance is an indirect tax of 16 kr per kilogram of saturated fat purchased, as illustrated by Figure 2:



The tax of 16 kr/kg levied is assumed to be equal to the negative externality “x”, as this is the ideal amount that would be required to precisely correct the market failure. Ideally, the concept of the tax is such that it shifts the supply curve,  $S_1$ , inwards to  $S_2$ . This causes a contraction along the demand curve,  $D$ , which makes the new equilibrium output SOO. Thus, if all assumptions about the externality’s value are correct, market failure will have been corrected, as output is now at the socially optimum level. It was assumed that  $PED = PES$ , due to the fact food has many substitutes and firms can store fatty foods (i.e. crisps) easily. Therefore consumer and producer tax burdens are equal ( $a=b$ )

The implications of this tax are such that the government receives revenue ( $a+b$  on Figure 2) that can be used in the medical treatment of those with cardiovascular

complications due to saturated fat consumption. Additionally, the market quantity for fatty foods is decreased, thus the overall health of the population is improved. However, the higher market price for fatty foods,  $P_2$ , will increase the cost of living for the poor, as they often purchase fatty foods due to low cost. This is due to the consumer burden of the tax (a). Producers of fatty foods will have higher costs of production, due to the producer burden of the tax (b) and lower equilibrium quantity. This impacts the industry in the form of lower profits and maybe unemployment. The overall long-term effect of this tax will be the gradual transition to healthier substitute foods such as vegetables, and the development of industry techniques to decrease the amount of saturated fat present in junk food. Additionally, the consumer suffers a slight infringement of freedom of choice as a result of this policy. The tax the government has levied could also be contested on grounds that it is extremely difficult to determine the value of an externality, and thus the policy may fail to correct market failure by either taxing too much or too little.

As the low-income demographic of consumers suffers most from this tax, a suitable alternative would be the subsidisation of healthy foods. Another alternative, though costly, would be to use negative advertising campaigns, shifting MPB inwards to MSB.